

Page 1

Monday, January 19, 2015 8:01:13 AM

Item ID: D4682-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Wearplate Assembly

Start Date: 1/19/2015 **Start Qty:** 6.00

6

Cust Item ID:

Required Date: 1/19/2015 **Req'd Qty:** 6.00

6

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 15-01-19 Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D4682	C
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110

0.00

110

Waterjet

FLOW CNC Waterjet

Memo

0.00

1-Cut as per dwg D4682-1

prog rev: C

dwg rev: C

2-Deburr if required

120

QC2- Inspect parts off machine FAI/FAIB

0.00

120

QC

Quality Control

Memo

0.00

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
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Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Work Order ID 128553

Monday, January 19, 2015 8:01:13 AM

128553

Page 3

Item ID: D4682-041 Accept ***N900040100*** Setup Start ***NS1***
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 Start Date: 1/19/2015 Start Qty: 6.00 ***6*** Cust Item ID:
 Required Date: 1/19/2015 Req'd Qty: 6.00 ***6*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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160	Weld per dwg A/R Hardcoat S.S. Batch: <u>1127737</u>	0.00				4	62	15-3-10	<u>P10</u>
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160

Large Fab	Memo	0.00							
-----------	------	------	--	--	--	--	--	--	--

Large Fab	1- Weld hardcoat as per dwg and QSI004								
-----------	--	--	--	--	--	--	--	--	--

2- Weld shim to wearplate as per dwg and QSI004
 A/R s.s. rod Batch #: 123823

170	QC9- Inspect visual per QSI004- Fusion Welds	0.00							
-----	--	------	--	--	--	--	--	--	--

170

QC	Memo	0.00				①	15-03-10		DAS 9 9-89
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Quality Control

180	QC5- Inspect part completeness to step on W/O	0.00							
-----	---	------	--	--	--	--	--	--	--

180

QC	Memo	0.00				①	15-03-10		DAS 9 9-89
----	------	------	--	--	--	---	----------	--	------------------

Quality Control

Work Order ID 128553

128553

Page 4

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190

190

Small Fab

Small Fab

Memo

1- Apply Rockguard on entire concave surface as per dwg
A/R Rockguard Batch: 131669

2- Indicate FWD direction as shown using white paint marker(SEE NOTE 11)

0.00

0.00

4

CR150311

200

200

QC

Quality Control

QC5- Inspect part completeness to step on W/O

Memo

0.00

0.00

4

DAS
38
9-89

MAR 13 2015

210

210

Packaging

Packaging

Identify as per dwg & Stock Location ST601

Memo

0.00

0.00

51

DAS
26
9-89

MAR 20 2015

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Page 5

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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
220	QC21- Final Inspection - Work Order Release	0.00							
220 QC	Memo	0.00							
Quality Control									

MLJ 15-03-20

#15-320

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Picklist Print

Monday, January 19, 2015 8:01:20 AM

Page 1

Work Order ID: 128553

128553

Parent Item: D4682-041

D4682-041

Parent Item Name: Wearplate Assembly

Start Date: 1/19/2015

Required Date: 1/19/2015

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A 13.03.27 NEW ISSUE DD VERF:JLM IPP
REV:B 13.11.14 AS PER DWG REV.B DD VERF:JLM IPP REV:C
14.03.13 AS PER DWG REV.PC1 DD VERF:JLM IPP REV:D 14.11.24
AS PER DWG REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D4682-11		Manufactured	No				Each	3.0000		6			
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D4682-11

Wearplate Shim

EL 15-36

Not in system

12690612

12783512

Location

Loc Qty

Loc Code

prelim

3

122376

3

M304S18GA

Purchased

No

110

sf

329.9673

1.06

7

M304S18GA

304/316 .050 Sheet

DL 15/01/21

Location

Loc Qty

Loc Code

MAT020

329.9673

124572

23

125552

22

M126647

24.6112

M128254

17.4387

M128435

27

M128864

33

M129530

55

M130345

38

M130923

89.9174

7.50

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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FIRST ARTICLE INSPECTION CHECKLIST

Measured by: <i>DC</i>		Audited by: <i>38</i>		Preliminary Approval:	
Date: <i>15/01/21</i>		Date: <i>JAN 22 2015</i>		Date:	

Rev	Date	Change	Revised by	Approved
A	13.05.08	New Issue	K.I.	<i>[Signature]</i>

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

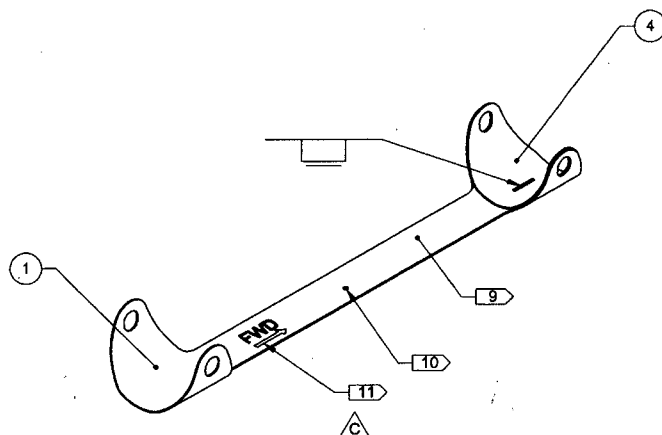
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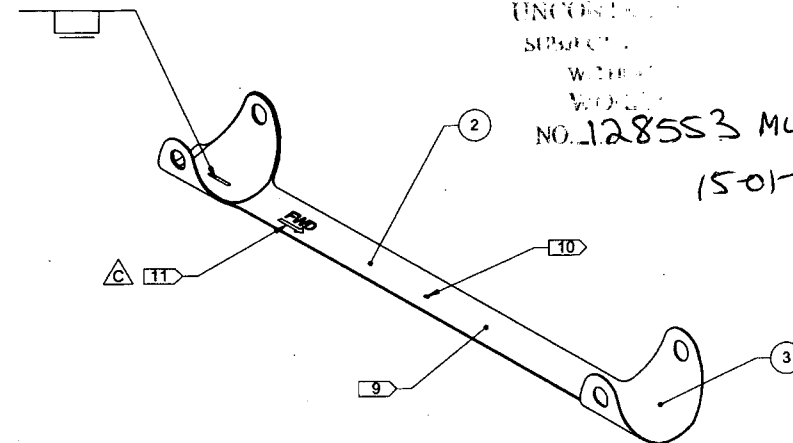
FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other _____
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ITEM	QTY -041	QTY -043	P/N	DESCRIPTION
	X		D4682-041	WEARPLATE ASSY
		X	D4682-043	WEARPLATE ASSY
1	1		D4682-1	WEARPLATE
2		1	D4682-3	WEARPLATE
3		1	D4682-9	WEARPLATE SHIM
4	1		D4682-11	WEARPLATE SHIM



D4682-041 WEARPLATE ASSY



D4682-043 WEARPLATE ASSY

STUDY
UNCLASSIFIED
SUBJECT
W. H. H.
V. H. H.
NO. 128553 MLJ
1501-19

RELEASED
2014-11-20

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4682-041" OR "D4682-043" AND B/N PER QSI 044 METHOD 6.1
- 7) WEIGHT: D4682-041 - 1.12 lbs
D4682-043 - 1.25 lbs
- 8) WELDING: PER QSI 004
- 9) COAT ENTIRE TOP (CONCAVE) SURFACE WITH TEXTURED COATING, 0.020-0.040 THICK PER QSI 005 SECTION 4.9
- 10) OPEN UP DRAIN HOLE IF NECESSARY TO Ø0.188 AFTER APPLYING TEXTURED COATING
- 11) INDICATE FWD DIRECTION AS SHOWN USING WHITE PAINT MARKER

C	ADDED FWD INDICATION ON D4682-041/-043 PER NOTE 11 (SHT 1). D4682-11 SHIM (SHT 8) REPLACED D4769-3 SHIM. VARIOUS DIMENSIONAL CHANGES TO THRU HOLES AND OVERALL DIMENSIONS OF D4682-1/-3/-5/-9 PARTS. REFERENCE TO PLUS ONE ROCKGUARD REMOVED.	AP	14.07.29
B	THRU HOLES NOW SLOTS. VARIOUS DIMENSIONAL CHANGES. Ø0.188 HOLE MOVED (B5-3). UPDATED PART WEIGHTS. REMOVED GRAIN DIR ON ALL PARTS D4769-3 WAS D4682-9 ON D4682-041 WEARPLATE ASSY.	AP	13.09.10
A	NEW ISSUE	AP	13.02.13
REV.	DESCRIPTION	BY	DATE
DESIGN	AP	DART AEROSPACE USA, INC. KENT, WA	
DRAWN	AP		
CHECKED	ML	DRAWING NO.	REV. C
MFG. APPR.	JLM	D4682	SHEET 1 OF 8
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	WEARPLATE ASSY	NTS
DATE	14.07.29	COPYRIGHT © 2013 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

APPROVED

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

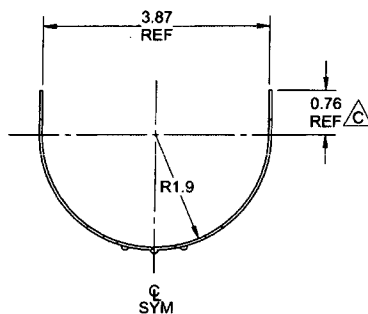
Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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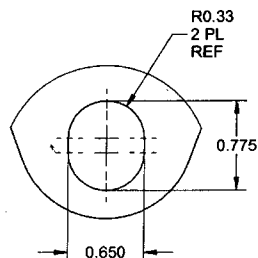
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other



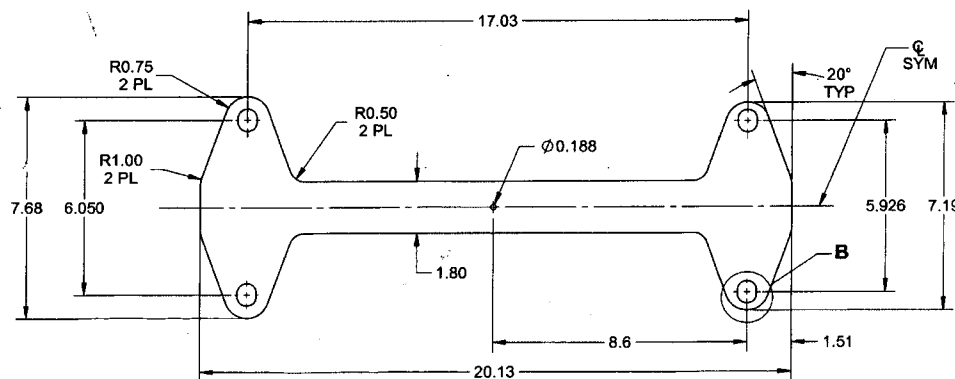
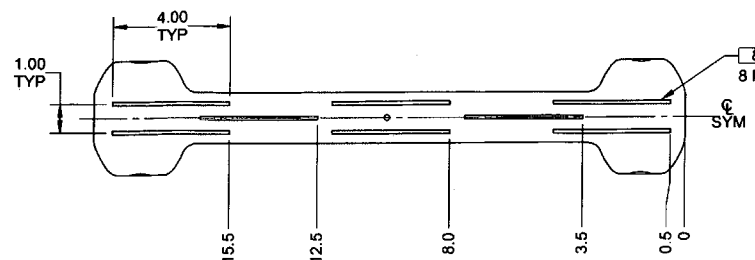
SECTION A-A
SCALE 2X



DETAIL B
SCALE 4X
2 PL



D4682-1 WEARPLATE
(MAKE FROM D4682-1F)



D4682-1F WEARPLATE
(FLAT PATTERN)

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL PER MIL-S-5059 OR AMS 5513 OR AMS 5524 OR ASTM A240 OR ASME SA240 18 GAUGE 0.050 THICK, REF DART SPEC. M304S18GA
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.89 lbs
- 8) WELDING: PER QSI 004, APPLY LAYER OF 2059B HARDCOAT WELD TO 0.063 - 0.125 HIGH AFTER BENDING
- 9) IT IS ACCEPTABLE TO OVERBEND D4682-1 UP TO 2 DEG OR UNDERBEND UP TO 5 DEG

RELEASED
2014-11-20
WJP

APPROVED

DESIGN	AP	DART AEROSPACE USA, INC.	
DRAWN	AP	KENT, WA	
CHECKED	ML	DRAWING NO.	REV. C
MFG. APPR.	JLM	D4682	SHEET 3 OF 8
APPROVED	MP	TITLE	SCALE
DE APPR.	DS	WEARPLATE ASSY	NTS
DATE	14.07.29	COPYRIGHT © 2013 BY DART AEROSPACE USA, INC.	
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
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